8/02/04



Docket No. 58069(47126)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ADI	\T 1	\sim	. T. T	~
APF	71	(' /	7 1	1 .
Δ 1			ZT 4	1.

G. Cevc

Confirmation No.: 7718

U.S.S.N.:

09/887,493

Group No.:

1654

FILED:

June 22, 2001

Examiner:

S. D. Coe

FOR:

IMPROVED FORMULATION FOR TOPICAL NON-INVASIVE

APPLICATION IN VIVO

Mail Stop: Amendment Commissioner for Patents P.O. Box 1450

Alexandria, VA 02209-9169

CERTIFICATE OF EXPRESS MAILING

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as Express Mail, Label No. EV 437 825 126 US addressed to the: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: J	luly	[,] 30,	2004	

y: XXX

Sir:

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

In accordance with the provisions of 37 C.F.R. §§1.56 and 1.97, Applicants herewith submit the publications and/or patents shown on the attached form PTO-1449, for consideration by the Examiner in connection with the examination of the above-identified patent application.

REMARKS

In accordance	with the provisions of 37 C.F.R. §1.97, this statement is being filed:
 (1)	within three (3) months of the Filing Date or before the mailing date of
	the First Office Action on the merits; or
 (2)	within three months of the mailing date of the Search Report issued by the
	PCT Patent Office; or

08/04/2004 WABDELR1 00000127 09887493

01 FC:1806

180.00 QP

(3) after the period defined in (1) but before the mailing date of a Final Rejection or Notice of Allowance, and the requisite Certification or fee under Rule 1.17(p), namely \$180.00, is included herein; or

X (4) after the mailing date of a Final Rejection or Notice of Allowance but before the payment of the Issue Fee, and the requisite Certification, petition, and petition fee are included herein.

It is respectfully requested that each of the documents shown on the attached form(s) PTO-1449 be made of record in this application. Copies of these documents (CHECK ONE):

____ are enclosed herewith; or
____ have been cited in the parent application, and are thus not being resubmitted herein.

FEE AUTHORIZATION

Enclosed herewith is a check in the amount of \$180.00 for submission of these cited references. Should any additional fees associated with the submission be required, the Commissioner is authorized to charge the missing fee to our Deposit Account, No. 04-1105. Any overpayments should be credited to said Deposit Account.

Respectfully submitted,

Date: July 30, 2004

Customer No.: 21874

Peter F. Corless (Reg. No. 33,860)

Edwards & Angell, LLP

P.O. Box 55874

Boston, MA 02205

(617) 439-4444

- 2 -

ATTY DOCKET NO. SERIAL NO. 58069 (47126) 09/887,493 INFORMATION DISCLOSURE CITATION Applicant(s): G. CEVC 🔐 şe several sheets if necessary) JUL 3 0-2004 FILING GROUP June 22, 2001 1654 **U.S. PATENT DOCUMENTS** PADEMAR *EXAMINER FILING DATE DOCUMENT NUMBER DATE NAME CLASS SUBCLASS INITIAL IF APPROPRIATE AA 5,607,692 04/04/1997 Ribier et al. 424 450 ΑB 5,958,379 28/09/1999 Regenold et al. 424 47 AC 4,944,948 31/07/1990 Uster et al. 424 450 AD 4,911,928 27/03/1990 Wallach 424 450 ΑĒ 5,238,613 24/08/1993 Anderson 264 22 AF 24/07/1990 Re. 33,273 Speaker 210 639 AG 4,619,794 28/10/1986 264 Hauser 4.1 ΑH 4,954,345 04/09/1990 Müller 424 450 ΑI 4,937,078 26/06/1990 Mezei et al. 424 450 ΑJ 4,921,706 01/05/1990 Roberts et al. 424 450 5,741,515 21/04/1998 424 ٩K Ciceri et al. 450 FOREIGN PATENT DOCUMENTS TRANSLATION **DOCUMENT NUMBER** DATE COUNTRY CLASS SUBCLASS YES NO BA 07-324029 JP 12.12.1995 вв 0 298 280 14.06.1988 EP BC 0 393 707 20.04.1990 EP BD 1 143 656 29.03.1983 CA OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) G. Cevc et al., Transdermal drug carriers: basic properties, optimization and transfer efficiency in the case of epicutaneously applied peptides, J. Contr. Rel., 36, pp. 3-16, 1995 CA S. Yuan, et al., Cationic Liposome and Gene Transfer, Progress in Physiological Science, 28(2), pp. 163-165, 1997 CB **EXAMINER** DATE CONSIDERED

Form PTO-A820 (also form PTO-1449)

considered. Include copy of this form with next communication to applicant.

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not

1011				58069 (47126) SERIAL NO. 09/887,493							
/	INFC	ORMATION DISCLOSURI	E CITATION ssary)		Applicant(s): G. CEVC						
JUL 3		S S S S S S S S S S S S S S S S S S S			FILING GROUP 1654						
FINTS TH	ANEM	riv	U.S	S. PATEN	T DOCUMENTS	1		1034			
EXAMINER		DOCUMENT NUMBER		T		01.400	CUROU AGO	FILING DAT			
INITIAL		DOCUMENT NUMBER	DATE	<u> </u>	NAME	CLASS	SUBCLASS	IF APPROPI			
•											
•											
-											
100								·			
	.		FORE	EIGN PAT	ENT DOCUMENTS			1	•		
		DOCUMENT NUMBER	DATE		COUNTRY	CLASS	SUBCLASS	TRANS YES	LATION NO		
	BE	0 088 046	11.02.1983	EP							
	BF	61-271204	01.12.1986	JP							
	BG	724218	17.10.1996	AU					×		
	вн	0 152 379	11.02.1985	EP							
		OTHER DOCUM	ENTS (Includir	ng Autho	r, Title, Date, Pertine	ent Pages, Etc.)				
EXAMINE	₹				DATE CONSIDERED						
EXAMINE	R: Initia	al if reference considered, wheth de copy of this form with next co	ner or not citation is	s in conform	mance with MPEP 609; D	raw line through c	itation if not in c	onformance	and not		
				pnount.							

Form PTO-A820 (also form PTO-1449)

JUL 3 0'2004 DOCKET NO: **SERIAL NO.:** 58069 (47126) 09/887,493 INFORMATION DISCLOSURE STATEMENT APPLICANT: G. CEVC FILING DATE: GROUP NO. June 22, 2001 1654 **UNITED STATES PATENT DOCUMENTS DOCUMENT** EXAM. **FILING DATE** INITIALS NUMBER **DATE** NAME **SUBCLASS CLASS** IF APPROPRIATE **FOREIGN PATENT DOCUMENTS DOCUMENT TRANSLATION** NUMBER **DATE COUNTRY CLASS SUBCLASS** YES/NO ΒI WO 98/17255 30.04.1998 **PCT**

WO 98/30215

WO 98/33483

WO 88/07362

WO 98/06750

WO 91/04013

WO 92/05771

WO 93/19736

WO 93/19737

16.07.1998

06.08.1998

06.10.1988

19.02.1998

04.04.1991

16.04.1992

14.10.1993

14.10.1993

PCT

PCT

PCT

PCT

PCT

PCT

PCT

PCT

BJ

BK

BL

BM

BN

BO

BP

BQ

EXAMINER:

Page 3 of 9

DATE:



FORM PTO-1449		DOCKET NO: 58069 (47126)		SERIAL NO.: 09/887,493				
								INFORMAT
				FILING DATE:	GF	ROUP NO).	
				June 22, 2001	165	54		
			UNITI	ED STATES PATENT DO	CUMEN	TS		
EXAM. INITIALS		DOCUMENT NUMBER	DATE	NAME	(CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
			F.C.	PREIGN PATENT DOCU	IMENTS			
-		DOCUMENT			MENTS			TRANSLATION
		NUMBER	DATE	COUNTRY		CLASS	SUBCLASS	YES/NO
	BR	WO 90/09782	07.09.1990	PCT				
	BS	WO 87/01938	09.04.1987	PCT				
	ВТ	3,713,494	29.10.1987	DE				
	BU	3,016,976	13.11.1980	DE				
	BV	1,289,420	24.09.1991	CA				
	BW	2,052,164	26.09.1992	CA				
	вх	1,740,283	28.07.1983	AU				
	BY	0,674,913	04.10.1995	EP				
	BZ	0,704,206	03.04.1996	EP				
	BAA	0,475,160	18.03.1992	EP				
	BBB	0,707,847	24.04.1996	EP				
	всс	0,280,492	31.08.1988	EP				
	BDD	0,102,324	07.03.1984	EP			·	
	BEE	0,224,837	24.11.1986	EP				
	BFF	0,211,647	25.02.1987	EP				
EXAMINER	\.				DA	TE:		

Page 4 of 9

6	IPE		Docket Number (Optional)	Application Number
10	1	Ó)	58069 (47126)	09/887,493
1		120 OISCLOSURE CITATION	Applicant(s) G. CEVC	
JUL	3 0 20104	(Use several sheets if necessary)	Filing Date	Group Art Unit
1			June 22, 2001	1654
EXAMIN	FRADEMA	OTHER DOCUMENTS (Including Author	or, Title, Date, Pertinent Pages, Etc.)	
INITIAL	-	G. Cevc, Transfersomes, Liposomes and Other	r Lipid Suspensions on the Skin: Perm	eation Enhancement, Vesicle Penetration,
	сс	and Transdermal Drug Delivery, Crit. Rev. The	er. Drug Carrier Syst., 13(3&4), pp. 25	7-388, 1996
•		A. Klibanov, et al., Activity of amphipathic po	obviothylana alycal) 5000 to prolong th	so simulation time of linesames depends or
		the liposome size and is unfavorable for immu		
•	CD			
		Benner, "The Human Body, The Wonderwor Mechanisms" Weltbild GmbH Augsburg (199	k of the Human Body, Structure, Fun	ctions, Interactions, Processes and
	CE	Methanisms Methan Quanti Angsoni g (177)	75)	
		Serva, FEINBIOCHEMICA FUR FORSCHU	NG for Serva Feinbiochemica GmbH	& Co. (1986/1987)
	CF			
		Cl. 1. I.M. L. Wienenimental Biachemistry	U.D. L. L. District Description	COL
		Clark, J.M., Jr., "Experimental Biochemistry 47-48	" Biocnemistry Division, Department	of Chemistry, University of Illinois, pp.
	CG			
-				
		Patel, H.M. "Liposomes as a Controlled-relea	ise System" Biomedical Society Transa	actions 609th Meeting, Leeds, pp. 513-516
	СН			
		Fieser, L.F., et al. "Organische Chemie" Hans	s Ruprecht Hensel. 2nd revised edition.	Vorlao Chemie GmbH. Weinheim/Berestr
	CI	(1968)	, , , , , , , , , , , , , , , , , , ,	Total Comments of the Comments
		Fluka Chemika-BioChemika Catalogue 16 (19	988/89)	
	CJ			
	21/	Roeding, J. "Liposomes and Niosomes in Pha Vesicular Systems, Interaction of Liposomes v	with the Skin" <i>Training Course No. 105</i>	Prospects, Techniques of Visualizing 5 from May 14 to 16, 1990, MARITIM
	СК	Hotel Nurnberg, Frauentorgraben 11, 8500 Nu	irenbwerg	
		L. Löbbecke, et al., "Effects of Short-Chain A	Alcohols On the Phase Behavior And I	nterdigitation Of Phosphatidylcholine
	CL	Bilayer Membranes," Biochimiea et Biophysic	ca Aeta, 1237, pp. 59-69, 1995	inter digitation of a nosphatic plenomic
		R. Singh, et al., "Liposomally Encapsulated D Vol. 12, No. 2, pp. 149-154, 1995	Diclofenac For Sonophoresis Induced S	Systemic Delivery," J. Microencapsulation,
	СМ			
		T Hanni at al. "Application of an Oily Cal."	Formed by Hydrogeneted Soybean Pt	gasahalinida as a Parautaneous
		T. Henmi, et al., "Application of an Oily Gel I Absorption-Type Ointment Base," Chem. Pha	arm. Bull, 42(3), pp. 651-655, 1994	Rosbuonbins as a reientameons
	CN			
EXAMINEI	R		DATE CONSIDERED	
				· · · · · · · · · · · · · · · · · · ·

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and

not considered. Include copy of this form with next communication to applicant.

(3)			Docket Number (Optional)	Application Number
OIPE,	1		58069 (47126)	09/887,493
	21	ATION DISCLOSURE CITATION (Use several sheets if necessary)	Applicant(s) G. CEVC	12-16162
JUL 3 0' 2004	3		Filing Date	Group Art Unit
<u> </u>	E	<u> </u>	June 22, 2001	1654
FADENA	7	OTHER DOCUMENTS (Including Author,		
•	со	M. Foldvari, et al., "Dermal Drug Delivery by L Microencapsulation, Vol. 7, No. 4, pp. 479-489, 1	iposome Encapsulation: Clinical and Ele 1990	ectron Microscopic Studies," J.
	СР	M. Foldari, "In Vitro cutaneous and Percutaneo Conventional Vehicles," <i>Pharmaceutical Research</i>	ous Delivery and in Vivo Efficacy of Tetr ch, Vol. 11, No. 11, 1994	racaine from Liposomal and
	cQ	M. Foldari, "Effect of Vehicle on Topical Liposo pp. 589-600, 1996	omal Drug Delivery: Petrolatum Bases,"	' J. Microencapsulation, Vol. 13, No.5,
	CR	M.E. Planas, et al., "Noninvasive Percutaneous Prolongation of Local Pain Insensitivity by Ane	Induction of Topical Analgesia by a Nevesthetic Liposomes," Anesth. Analg., 75,	א Type of Drug Carrier, and pp. 615-621, 1992
	cs	H. Peters, et al., "Pharmacodynamics of a Lipos Nr. 12, 1995	somal Preparation for Local Anaesthesia	ı," Arzneim-Forsch./Drug Res., 45(II),
	СТ	I. Stoye, et al, "Transformation of a Liposomal Micelles - Physico-chemical Characterization an European Journal of Pharmaceutics and Biophan	nd Influence on Drug Permeation throug	ate and Phospholipids into Mixed 3h Excised Human StratumCorneum,"
	CU	J. Schramlova, et al., "The Effect of an Antiphlo Folia Biologica (Praha), 43, pp. 195-199, 1997	ogistic Incorporated in Liposomes on Exp	perimentally Induced Inflammation,"
	1	G. Cevc, "Drug Delivery Across the Skin," Exp.	D. Opin. Invest. Drugs, 6(12), pp. 1887-19	37, 1997
	cv	,	, , , , , , , , , , , , , , , , , , ,	,
EXAMINER			DATE CONSIDERED	
*EXAMINER: I	nitial if	citation considered, whether or not citation is in confor	rmance with MPEP Section 609; Draw line th	arough citation if not in conformance and

not considered. Include copy of this form with next communication to applicant.



FORM PTO-1449				DOCKET NO: SERIAL NO.:			NO.:			
				58069 (47126) 09.887,493						
INFORMATION DISCLOSURE STATEMENT		APPLICANT: G. CEVC								
•				FILING DATE:	GRO	OUP NO),			
				June 22, 2001	1654					
			UNITE	D STATES PATENT DOCUM	MENT	'S				
EXAM.		DOCUMENT						FILING DATE		
INITIALS		NUMBER	DATE	NAME	CL	LASS	SUBCLASS	IF APPROPRIATE		
•	1		FO	REIGN PATENT DOCUMEN	TS					
		DOCUMENT						TRANSLATION		
		NUMBER	DATE	COUNTRY	CL	LASS	SUBCLASS	YES.NO		
	OTHER DOCUMENTS									
	CW			diated transepidermal delivery in of Controlled Release 45 (1997)			gio-specificity a	nd biological activity		
	CX	V.M. KNEPP et al., CONTROLLED DRUG RELEASE FROM A NOVEL LIPOSOMAL DELIVERY SYSTEM II. TRANSDERMAL DELIVERY CHARACTERISTICS, <i>Journal of Controlled Release</i> 12 (1990) March, No. 1, Amsterdam, NL, pp. 25-30								
	CY		" on I.C.I. Ltd., I	FACTORS INFLUENCING TH Plant Protection Division, Jealott						
	CZ	K. Karzel and R. k	K. Liedtke, "MEC	CHANISMEN TRANSKUTANI	ER RE	SORPT	ION" on <i>Grandle</i>	agen.Basics, pp. 1487-		
	CAA	Michael Mezei, "L (Biomedical Divis		A SKIN DRUG DELIVERY S	YSTEN	M" 1985	Elsevier Science	e Publishers B.V.		
	СВВ			ei,, "TOPICAL ANESTHESIA (1988; 67: pp. 1079-81	OF TH	E SKIN	BY LIPOSOMI	E-ENCAPSULATED		
	CCC	A. Helenius, et al, (1975) 29-79	A. Helenius, et al, "SOLUBILIZATION OF MEMBRANES BY DETERGENTS", Biochimica et Biophysica Acta, 415 (1975) 29-79							
	CDD		Phillip G. Green, et al., "IN VITRO AND IN VIVO ENHANCEMENT OF SKIN PERMEATION WITH OLEIC AND LAURIC ACIDS" on <i>International Journal of Pharmaceutics</i> , 48 (1988), pp. 103-111							
	CEE		Guia M. Golden et al., "ROLE OF STRATUM CORNEUM LIPID FLUIDITY IN TRANSDERMAL DRUG FLUX" on Journal of Pharmaceutical Sciences, Vol. 76, No. 1, January 1987, American Pharmaceutical Association, pp. 25-28							
	CFF	USING FATTY A	Bruce J. Aungst et al., "ENHANCEMENT OF NALOXONE PENETRATION THROUGH HUMAN SKIN IN VITRO JSING FATTY ACIDS, FATTY ALCOHOLS, SURFACTANTS, SULFOXIDES AND AMIDES" on International Journal of Pharmaceutics, 33 (1986) pp. 225-234							

Page 7 of 9



FORM PTO-1449 DOCKET NO: SERIAL NO.:										
INFORMATION DISCLOSURE STATEMENT		58069 (47126)	09.887,	09.887,493						
		APPLICANT: G. CEVC								
				FILING DATE:	GROUP N	0.				
				June 22, 2001	1654					
•			UNITI	ED STATES PATENT DOC	CUMENTS					
EXAM. INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	CLASS SUBCLASS IF APPROPRIA				
•										
	Ι		FC	PREIGN PATENT DOCUM	IENTS		1			
•		DOCUMENT					TRANSLATION			
		NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES.NO			
				OTHER ROCKINGS						
	000			OTHER DOCUMENTS			02.22.22.2			
	CGG		IRING LONTO	ACTERIZATION OF THE P OPHORESIS" on <i>Journal of I</i> tion, pp. 765-773						
	СНН		E FLUCTUAT	OF A NEW NEEDELESS IN TONS AND FREE INSULIN						
	CII			NTERAL ADMINISTRATIOn Carrier Systems, Volume			DRUGS" on CRC			
	C11		Cevc, G. et al., "Ultraflexible vesicles, Transfersomes, have an extremely low pore penetration resistance and transport herapeutic amounts of insulin across the intact mammalian skin," <i>Biochimica et Biophysica Acta.</i> , 1368 pp. 201-215 1998)							
	СКК	Cevc, G., "Material Physics, Vol. 1, pp.		oss Permeability Barriers by 1	Means of Lipid V	esicles," Handbo	ook of Biological			
	CLL	Mayer, L.D. et al., 858 pp. 161-165 (1		riables sizes produced by a ra	pid extrusion pro	ocedure," Biochim	nica et Biophysica Acta			
	СММ	Patel, H.M. et al., " LETTERS, 62(1):60		NISTRATION OF INSULIN 1976)	BY ENCAPSUL	ATION WITHIN	LIPOSOMES," FEBS			
	CNN			el Drug Carrier, I. Phospholip in therapy," <i>Pharmazie in uns</i>			ion of Liposomes; II.			

Page 8 of 9



- 11/10									
FORM PTO	D-144	9		DOCKET NO:		SERIAL NO.:			
			58069 (47126) 09.887,493		93				
INFORMATION DISCLOSURE STATEMENT			APPLICANT: G. CEVC						
				FILING DATE:	GROU	P NO).		
				June 22, 2001	1654				
			UNITI	ED STATES PATENT DOCUM	MENTS				
EXAM.		DOCUMENT						FILING DATE	
INITIALS		NUMBER	DATE	NAME	CLA	ss	SUBCLASS	IF APPROPRIATE	
			FC	REIGN PATENT DOCUMEN	NTS				
		DOCUMENT						TRANSLATION	
		NUMBER	DATE	COUNTRY	CLA	ss	SUBCLASS	YES.NO	
				OTHER DOCUMENTS					
	coo	Beyer, C. et al., "N	Aicro Emulsions	" Pharmazie in unserer Zeit, No	. 2 (1983))			
	СРР	Lichtenberg, D. et al., "SOLUBILIZATION OF PHOSPHOLIPIDS BY DETERGENTS STRUCTURAL AND KINETIC ASPECTS," <i>Biochimica et Biophysica Acta</i> , 737 pp. 285-304 (1983)							
	CQQ	Lasch, J. et al., "Interactions of external lipids (lipids vesicles) with the skin," <i>Journal of Liposome Research</i> , 5(3) pp. 543-569 (1995)							
	CRR	Berger, M., "Oral Dusseldorf, Germa		92: The History of Continuous A	Ambition	and F	ailure," Heinrich	n-Heine-University,	
	css		Cevc. G. et al., "The skin: a pathway for systemic treatment with patches and lipid-based agent carriers," Advanced Drug Delivery Reviews 18 pp. 349-378 (1996)						
	СТТ	M.L. Jackson, et a biochemistry 1982		ATION OF PHOSPHATIDYLC	HOLINE	BILA	AYERS BY OC	TYL GLUCOSIDE,"	
	CUU	P. Vinson, et al., "VESICLE-MICELLE TRANSITION OF PHOSPHATIDYLCHOLINE AND OCTYL GLUCOSIDE ELUCIDATED BY CRYO-TRANSMISSION ELE TRON MICROSCOPY," <i>Biophys. J., Biophysical Society</i> Volume 56 October 1989 669-681							
	cvv	K. Edwards, et al., "EFFECTS OF TRITON X-100 ON SONICATED LECITHIN VESICLES," <i>Langmuir</i> , Vol. 5, No. 2, 1989 pp. 473-478							
	A. Brendzel, et al., "EFFECTS OF LIPID-SOLUBLE SUBSTANCES ON THE THERMOTROPIC PROPERTIES OF LIPOSOME FILTRATION," Biochimica et Biophysica Acta, 601 (1980) 260-270								
	cxx			ER AND STABILITY PROPER D IN VIVO," <i>Journal of Liposo</i>					
EXAMINE	₹:		٥		DATE:				